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EXAMINER

DINH, TUAN T

ART UNIT PAPER NUMBER

2827

DATE MAILED: 10/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

elm

# Office Action Summary

Application No.

09/552,221

Applicant(s)

SVARFVAR ET AL.

Examiner

Tuan T Dinh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18 and 19 is/are allowed.
- 6) ☒ Claim(s) 1-13, 15 and 16 is/are rejected.
- 7) ☒ Claim(s) 14, 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 9/9/02 have been fully considered but they are not persuasive.

#### **Applicant argues:**

(a) Knecht does not teach a basis for disclosing EMI shielding.

(b) Knecht does not teach an electrically conductive fiber mesh insert molded into wall surfaces.

(d) Knecht does not teach a fiber mesh net for EMI shielding or mention for EMI purposes.

(e) Knecht does show a wire mesh (202) not an electrical conductive fiber mesh net and not insert into the cover.

(f) Knecht in view of Lamp does not teach a fiber mesh net made by bobbinet woven in three directions.

(h) Knecht in view of Bruner does not teach a textile structure mesh net.

(g) Knecht in view Yoshikawa does not teach a fiber mesh net laminated to a polymer film sheet.

#### **Examiner disagrees.**

Response to argument (a), Knecht discloses a shielding apparatus for an electronic package, which is prevented an isolation of RF of the package; therefore, Knecht discloses a concept of an EMI shielding structure.

Response to arguments (b), (d), and (e), Knecht discloses an EMI shielding apparatus having a wire mesh such as a fiber mesh net (202) rest on film (110) of a lid or cover (102), the fiber mesh net (202) insert molded into wall surface of lid (102) by using plating configuration processes such as: E-beam evaporator, thermal evaporator, sputtering machine, or etc..

Response to arguments (f), (h), and (g), Knecht discloses the fiber mesh net (202) for the EMI shielding structure of the apparatus. Even though, Knecht does not discloses different structures of the fiber mesh nets such as bobbinet woven, textile structure, or laminated on the polymer film; however, either Knecht in view of Lamp, Bruner, or Yoshikawa, all teach the structures of the bobbinet woven, the textile structure, and laminated to the polymer film sheet which are obvious to employ the structure of the fiber mesh net of Knecht (see action below).

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 8-9 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Knecht et al. (U. S. Patent 5,313,371).

**Regarding claims 1, 8 and 16**, Knecht discloses an EMI shielding apparatus and a method (102, column 3, lines 45-46) as shown in figures 1-5 for a portable electronic device (200-figure 2) characterized in that:

an electrically conductive fiber mesh net (202-figure 2A, column 3, line 49) insert molded (110, column 3, line 48, lines 66-68, and 201, 203, column 4, lines 13-15) into wall surfaces defining an interior cavity (see figure 2) of said electronic device; and said cavity having a size shape and contour to surround first electronic circuitry within said electronic device (see figure 1).

**Regarding claims 2, 9,** Knecht discloses an EMI shielding apparatus and a method as shown in figures 1-5 further characterized in that:

at least a portion of said insert molded electrically conductive fiber mesh net (202) is in a substantially continuous physical and electrical contact with a ground plane (112, column 4, line 34) carried on a circuit board (104, column 4, line 31) within said electronic device.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. *Claims 6, 10-11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knecht in view of Lamp et al (U. S. Patent 3,580,981).*

Knecht discloses all of the limitations of the claimed invention, except for the fiber mesh net being a bobbinet woven three directional. Lamp shows an EMI shielding gasket (13, column 2, line 52) as shown in figures 1-4 having a fiber mesh net (12,

column 2, line 53) made by bobbinet woven (hexagonal mesh having six sides) in three directional (column 4, lines 11-32).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the EMI shielding apparatus of Knecht and provide the fiber mesh net (16) made by bobbinet woven in three directional as taught by Lamp in order to dissipate of heat and facilitate the shielding against EMI.

6. *Claims 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knecht in view of Bruner et al (U. S. Patent 5,795,835).*

Knecht discloses all of limitations of the claimed invention, except for the fiber mesh net comprising a textile structure mesh net included at lest warp knitted. Bruner teach a warp knit textile mesh (10) as shown in figures 1-3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the EMI shielding apparatus of Knecht and provide the warp knit textile mesh as taught by Bruner in order to construct a maximize strength of shielding structure and minimize leakage EMI from a shielding apparatus.

7. *Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knecht in view of Yoshikawa et al. (U. S. Patent 6,150,754).*

Knecht discloses all the limitations of the claimed invention, except for the fiber mesh net is laminated to a polymer film sheet. Yoshikawa teaches the fiber mesh net

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(3-figure 1, column 8, line 16) laminated to the polymer film sheet (4B-figure 1, column 8, line 20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the EMI shielding apparatus of Knecht and provide the fiber mesh net laminated to the polymer film sheet as taught by Bruner in order to protect the apparatus and against the leakage of EMI.

***Allowable Subject Matter***

8. Claims 4-5, 14, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. Claims 18-19 are allowed.
10. The following is an examiner's statement of reasons for allowance:

Neither the references cited nor the cited references do not teach or suggest EMI shielding apparatus comprising: a fiber mesh net being laminated to a polymer film sheet, the polymer film sheet has an electrically non conductive surface opposite said fiber mesh net surface for carrying second electronic circuitry, and the fiber mesh net having at least a portion electrically coupled to said second electronic circuitry and to first electronic circuitry within an electrical device for passing electronic signals between the first and second electronic circuitries.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-1341 for regular communications and 703-305-1341 for After Final communications.



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

**TD**

October 2, 2002.

*Albert W. Paladini 10-15-02*  
**ALBERT W. PALADINI**  
**PRIMARY EXAMINER**